

Patent Application No. 10/643,253

IN THE CLAIMS:

Please amend claims 8, 13, 17 and 23, and cancel claims 9, 16, 18 and 20 as follows:

Claim 1. (previously presented) A method for predicting the failure of an electronic circuit in an electronic device, the method comprising:

5 receiving a measured value for current draw of the electronic circuit from at least one voltage supply;

receiving at least one measured value for an environmental condition, wherein the environmental condition includes an environment temperature;

10 monitoring at least one operating condition of the electronic circuit, wherein the operating condition includes a CPU utilization level;

determining if the measured current draw is outside a pass range for the measured environmental condition and for the operating condition of the electronic circuit; and

15 alerting of a potential failure of the electronic circuit if the measured current draw is outside the pass range.

Claims 2 and 3 (canceled)

Claim 4. (previously presented) A method for predicting the failure of an electronic circuit in an electronic device, the method comprising:

5 receiving a measured value for current draw of the electronic circuit from at least one voltage supply;

receiving at least one measured value for an environmental condition, wherein the environmental condition includes an environment temperature;

10 monitoring at least one operating condition of the electronic circuit, wherein the operating condition includes a clock frequency;

determining if the measured current draw is outside a pass range for the measured environmental condition and for the operating condition of the electronic circuit; and

15 alerting of a potential failure of the electronic circuit if the measured current draw is outside the pass range.

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Claim 5. (original) The method of claim 1, further comprising recording the current draw and environmental condition of the electronic circuit in a circuit log.

Claim 6. (original) The method of claim 5, wherein if the electronic circuit fails, isolating the electronic circuit from among a plurality of potentially failed electronic circuits in the electronic device using the recorded current draw and environmental  
5 condition of the electronic circuit.

Claim 7. (original) The method of claim 1, further comprising monitoring the current draw of significant circuit functions.

Claim 8. (currently amended) A system for predicting the failure of an electronic circuit, the system comprising:

a current monitor configured to receive a measured value for a current draw to the electronic circuit from at least one voltage  
5 source;

an environment monitor configured to receive a measured value for at least one environmental condition of the electronic circuit, wherein the at least one environmental condition includes an environment temperature;

10 a circuit state monitor configured to determine at least one operating condition of the electronic circuit, wherein the at least one operating condition includes a CPU utilization level; and

a failure alert unit configured to provide an alert notification when the current draw to the electronic circuit is  
15 outside a pass range at the measured environmental condition and the measured operating condition of the electronic circuit.

Claim 9. (canceled)

Claim 10. (original) The system of claim 8, wherein the at least one operating condition includes a clock frequency.

Claim 11. (original) The system of claim 8, further comprising a circuit log configured to record the current draw, environmental condition and operating condition in computer readable memory.

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Claim 12. (original) The system of claim 8, wherein the current monitor is further configured to measure the current draw of significant circuit functions.

Claim 13. (currently amended) A method for manufacturing an electronic circuit, the method comprising:

assembling the electronic circuit;

5 measuring a current draw of the electronic circuit at different environment conditions and operating conditions, wherein the different environmental conditions include an environment temperature;

monitoring the current draw of significant circuit functions;

and

10 recording the current draw in an operating matrix, the operating matrix configured to be used during normal operation of the electronic circuit to alert when the current draw to the electronic circuit is outside a pass range at the measured environmental condition.

Claim 14. (original) The method of claim 13, wherein recording the current draw in an operation matrix further comprises recording the current draw in nonvolatile memory.

Claim 15. (original) The method of claim 13, further comprising placing the assembled electronic circuit in a controlled environment.

Claim 16. (canceled)

Claim 17. (currently amended) A computer program product embodied in a tangible media comprising:

5 computer readable program codes coupled to the tangible media for predicting the failure of an electronic circuit in an electronic device, the computer readable program codes configured to cause the program to:

measure a current draw of the electronic circuit from at least one voltage supply;

10 measure at least one environmental condition at the electronic circuit, wherein the at least one environmental condition includes an environment temperature;

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monitor at least one operating condition of the electronic circuit, wherein the operating condition includes a clock frequency;

15 determine if the measured current draw is outside a pass range for the measured environmental condition and the operating condition of the electronic circuit; and

alert of a potential failure of the electronic circuit if the measured current draw is outside the pass range.

Claim 18. (canceled)

Claim 19. (original) The computer program product of claim 18, wherein the operating condition includes a CPU utilization level.

Claim 20. (canceled)

Claim 21. (original) The computer program product of claim 17, further comprising computer readable program code configured to cause the program to record the current draw and environmental condition of the electronic circuit in a circuit log.

Claim 22. (original) The computer program product of claim 17, further comprising computer readable program code configured to cause the program to monitor the current draw of significant circuit functions.

Claim 23. (currently amended) A system for predicting the failure of an electronic circuit in an electronic device, the method comprising:

5 means for receiving a measured value for current draw of the electronic circuit from at least one voltage supply;

means for receiving at least one measured value for an environmental condition, wherein the at least one environmental condition includes an environment temperature;

10 means for monitoring at least one operating condition of the electronic circuit, wherein the operating condition includes a clock frequency;

means for determining if the measured current draw is outside a pass range for the measured environmental condition and the operating condition of the electronic circuit; and

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15 means for alerting of a potential failure of the electronic circuit if the measured current draw is outside the pass range.

Claim 24. (previously presented) The method of claim 1, wherein the wherein the at least one environmental condition includes an environment humidity.

Claim 25. (previously presented) The system of claim 8, wherein the at least one environmental condition includes an environment humidity.

Claim 26. (previously presented) The method of claim 13, wherein the different environmental conditions include environment humidity.

Claim 27. (previously presented) The computer program product of claim 17, wherein the different environmental conditions include environment humidity.

Claim 28. (previously presented) The system of claim 8, wherein the operating condition is an operating condition which the electronic circuit was designed to operate at.